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Team Communication Foundations

Sponsored by:

GSFC's Software Process Improvement (SPI) Project

- **Team communication is very critical to team success**

- **Communicate with your team regularly using multiple communication mechanisms , including**
  - **Meeting Minutes**
  - **Issues and Risks**
  - **Action Items**
  - **Emails**

- **Document the communication and keep it readily available**

Meeting Minutes

Good Reasons for Meeting Minutes

- **Good meeting minutes help you ..**
    - **Capture major topics discussed at the meeting**
    - **Document decisions, agreement, and actions assigned**
    - **Show stakeholder involvement (or lack thereof)**
    - **Communicate with stakeholders and hold them to their commitments**
    - **Avoid the "shaky memory" of other people**
    - **Document clarification and understanding of requirements**
    - **Document approvals or commitments**
    - **Capture decisions on tailoring and use of processes, analysis of issues, analysis of measures**
- **You'll need meeting minutes to show compliance with the NPR and CMMI**

Meeting Minutes

- **Meetings that must have minutes (at a minimum):**
  - **IRBs/CCBs**
  - **Meetings discussing and understanding requirements**
  - **Meetings with Contractors**
  - **Status meetings (including team status meetings)**
  - **Risk reviews**
  - **Inspections, code reviews, test walkthroughs**
  - **Document walkthroughs**

- **Capture the following:**
  - **Agenda**
  - **Attendance (including role information)**
  - **Important decisions with rationale and commitments**
  - **Process issues or concerns**
  - **Issues/action items by reference**

- **We encourage the use of the Minutes Template*, but other methods are acceptable**

  * http://software.gsfc.nasa.gov/tools.cfm

- **Note the agenda of the meeting, along with anything attendees are to bring**
  - **This should go out in the invitation email**
- **Note the required attendees**
  - **If a required attendee is not present, state what action you will take in the minutes, e.g.,**
    - Sending out minutes
    - Postponing the meeting
- **Identify those in attendance (with their role)**

Status Review Meeting Minutes (example)
ABC Development Project
March 22, 2007, 10:00am, Room E230

Agenda:
BSR Overview Section (PDL) (10 minutes)
BSR Development Section (DTL) (10 minutes)
BSR Test Section (TTL) (10 minutes)
BSR Wrap-up Section (PDL) (5 minutes)
Action Item Review (10 minutes)
Other business (as required)

Items to read prior to the meeting: None
Items to bring to the meeting: Action Item status for all current action items

Attendees:

Name	Role/Responsibility	Required	Present
Paula Abdul	Branch Head	X	X
Marvin Gaye	Product Development Lead (PDL)	X	X
Billy Joel	Development Team Lead (DTL)	X	X
Harry Commack, Jr.	Development Team Member	X	X
Sheryl Crow	Test Team Lead (TTL)	X	X
Kelly Clarkson	Test Team Member		X
Roberta Flack	Associate Branch Head		
Kenny Loggins	Associate Branch Head		X
Jackson Browne	Process Engineer		
John Mellencamp	Data Librarian		
Carly Simon	SW Quality Engineer		X

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- **Record what was discussed and any decisions made**
- **Review any action items from related prior meetings**
  - **This may mean using a copy of your action item log**
- **Note any other business, such as**
  - **Items not on agenda**
  - **Announcements**

Discussion

All sections of the BSR Package were presented and reviewed per the agenda. Two new action items were assigned as noted in the Action Item Review Section

Decisions:

During the meeting it was decided that the two staffing slides in the BSR template would be condensed into one since the same information was conveyed in two different formats.

Action Item Review:

All 16 existing action items were reviewed.

There were 8 action items closed: #71, 68, 67, 66, 58, 48, 44, 35.

There were 2 new action items were assigned during the meeting:

#	Assignee	Action	Priority	Due Date
74	Joan	Issue: Kelly Clarkson could be much more useful to the test team if she could access the test tool via VPN from offsite. Action: look into getting a VPN account and software for Janet.	2	10/13/06
75	Jim	Issue: Test Team Progress Tracking charts (p20, 21): (1) baseline should track reductions or additions to total points, (2) data table at bottom of chart doesn't show anything useful. Action: update baseline, delete data table (but add legend to identify lines) - see p12 in this package for example.	2	10/13/03

See the full action item log in the ABC Web Repository for current status and action details.

Other Business:

It was announced that a special training class will be held on the new CM Tool next week. Those who will use the tool should be told to attend.

What To Do With Your Minutes

- **Keep Them!!**
  - **Minutes should be stored in an organized fashion**
  - **Storage location should be identified in a Data Management List (DML) …** *we'll talk about this in a later session*

- **Establish a naming convention that will help you find the right minutes**
  - **Put the meeting type or topic, plus the date in the name, e.g.,**
    - Status_Review_2007-12-13.doc
    - Code_inspection_meeting_for_ABC 2007-06-06.doc
    - Req_Analysis_Subsys_XYX_2006_05_08.doc

- **Make sure everyone on your team knows where to find and store their minutes.**

Action Items

Action Items

- **Each project needs to create and maintain its own action item (AI) list**

- **AI lists must contain:**
  - **Management and acquisition-related actions**
  - **Process-related actions**
  - **Technical-related actions**

- **All action items must be tracked to closure**

- **You may have an AI list for each major subsystem, but avoid having a "bunch of lists"**
  - **Using a shared tool can reduce it to one list that gives the PDL better visibility into status of actions**

Action Item Tracking Tool

- **Action Item Tracking Tools can be found at http://software.gsfc.nasa.gov/tools.cfm**

- **Two tools are available: a spreadsheet tool and a web-based tool**

- **Contact for the web-based tool is Chris Durachka, Code 585, cdurachk@pop500.gsfc.nasa.gov**

- **The tools allow the user to**
  - **Assign an Action Item (AI) numbering scheme**
  - **Log project actions and the date they were opened**
  - **Assign staff to work the AI toward a specific due date**
  - **Provide status of each AI on an ongoing basis**
  - **Track each AI to closure**
  - **Maintain a history of action items**
  - **Generates an Action Item Tracking Log report that contains**
    - Number of AIs Open, Number of AIs Closed, and Average Days to Close AIs

Enter Each New Action Item

- **Assign the next Action Item number**
- **Describe the Action to be taken**
- **Identify the Assignee**
- **Document the date opened and the due date**

ABC Action Items Tracking Log					Report Date:		03/06/06

			Total Als Open	3			
			Total Als Closed	1	50	Average Days to Close	

AI ID	Action Item	Assigned To	Date Opened	Date Due	Date Closed	Days Open	Notes / Status
1	Come up with some text to fill in the blank areas of the web site (e.g., "About this Site")	Jody	12/15/05	02/06/06	02/06/06		02/06/06: Text submitted to the webmaster. 12/15/05: Eight areas on the web site are empty and need text added.
2	Prepare a more useful way of reporting metrics at management reviews	Mike	12/15/05	03/08/06		81	02/06/06: review comments incorporated and draft completed, but Mike needs to meet with mgmt to finalize. 01/15/06: first draft distributed for review.
3	Order the CM tool	Sue	01/06/06	03/08/06		59	03/06/06: Difficulties in contacting the vendor have delayed completion of the PO. 02/06/06: Team reviewed the CM Tool options and decided to purchase the xyz tool. (See Make/Buy analysis on CM Tool). Sue to write up the purchase order.
4	Contact Archie about the latest changes in the interface to the YOUOWN system.	Dave	03/01/06	04/15/06		5	03/06/06: New

Track the Action Item to Closure

- **Periodically (preferably at least monthly) note the status of the action with the current date**
  - **Entering the latest date on top makes for easier reading**
  - **Check the days open column for "forgotten" actions (text is blue if open more than 29 days, or white highlighted in red if open 60 days or more)**
- **Enter the date closed when the action has been completed**
  - **Report on the action once after it has been closed, then hide the row … don't delete rows!**

ABC Action Items Tracking Log

				Report Date:			03/06/06
Total AIs Open		3					
Total AIs Closed		1		50	Average Days to Close		

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Review Action Item Metrics

- **Metrics are automatically provided by the tool**
  - **Total action items open and total closed**
  - **Average days to closure**
- **If you are collecting these metrics on a monthly basis, record them in your metric collection location for future analysis**

ABC Action Items Tracking Log							Report Date: 03/06/06
			Total AIs Open	**3**			
			Total AIs Closed	**1**		**50**	Average Days to Close

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Issues and Risks

Issues

- **What is an Issue?**
  - **It's a problem that needs to be addressed**
  - **For an acquisition project, it may be your issue or a Contractor issue**
  - **You may not know exactly how to address it or what the impact is without some analysis … you'll need to identify the action needed for resolution**
  - **The actions from the action plan become action items when assigned to an individual**

- **Why track issues to closure?**
  - **Issues are problems … you need to make sure they get resolved**
  - **You may need help from others to resolve the issue … track it to make sure you're getting that help**
  - **Issues should be reported up to management … they can often help if you don't get what you need from others.**

Issue Tracking Tool

- **The Issue Tracking Tool (http://software.gsfc.nasa.gov/tools.cfm) ensures that the user maintain all key parts of an issue**
  - **The issue description**
  - **The issue analysis and impact**
  - **The action plan**
  - **The issue status**

ABC Issues Log			As of: 01/25/07
Issue	**Analysis / Impact**	**Action Plan**	**Status**
None	<analysis here> **Impact:**		MM/YY:
CM procedures document has been stalled for months	So-and-so created a very early draft, but then decided to wait for the CM Plan to solidify. That happened, but no one picked up the CM procs doc again. **Impact:** Teams will be unable to consistently and correctly apply CM procedures without this document.	John Doe will ask the Branch for some of So-and-so's or So-and-so-Jr's time to finish this document. Action Due Date: 06/01/06	08/06: New issue this month.
Project eliminates one C&DH ETU to save costs	This ETU was to be dedicated to the FlatSat. Now FlatSat and HW team will share one ETU. **Impact:** FSW System test schedule could be delayed when HW takes the ETU.	Details of this Action Plan are being tracked as Action Items 13, 14, and 15 in the Project Action Item list.	08/06: Risk has been raised to project "top ten." A number of mitigation options are being considered. 07/06: No change. Project has taken no action to mitigate this risk. 06/06: This has been raised as a risk in the project's risk system. 04/06: New issue this month.

- **An issue is like a risk, but it has already happened when you recognize it**
  - **If it hasn't happened, but is a potential issue, then it's a risk!**
- **The *issue description* states what the issue is**
  - **For acquisition projects the list should capture issues associated with acquiring a product, not just the contractor's issues in producing the product**

What is the issue currently causing you concern?

ABC Issues Log			As of: 01/25/07
Issue	**Analysis / Impact**	**Action Plan**	**Status**
None	<analysis here> **Impact:**		MM/YY:
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Issue Impact and Analysis

- **The *analysis* provides the "what makes this is an issue" or "why this happened"**
- **The *impact* describes how this issue might affect your cost, schedule, or quality**
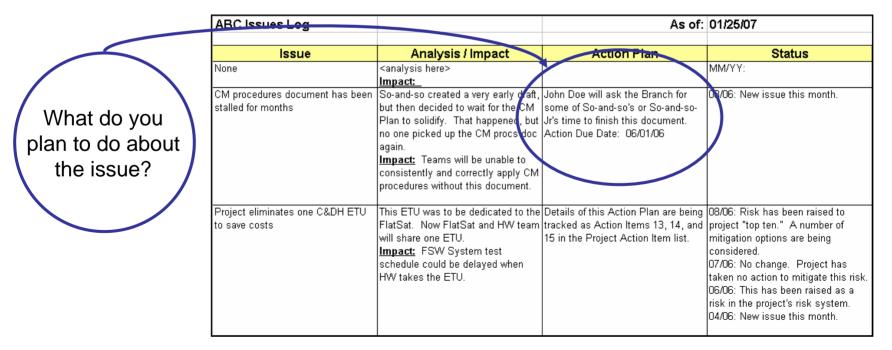
What does this issue really mean to your project?

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None	\<analysis here\> **Impact:**		MM/YY:
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Action Plan

- **The action plan describes how you plan to resolve the issue**
  - **It may include the names of those tasked with resolving the issue**
  - **It may link to one or more action items to be done in resolving the issue**

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What do you plan to do about the issue?

Issue Status

- **The status provides an indication of how the resolution is going**
  - **It should have a date on each entry (preferably monthly**
  - **It should state what parts of the action plan have been initiated, worked on, or closed**
  - **It should state clearly when an issue has been resolved**

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How close are you to resolving the issue?

Risks

- ## What is a Risk?

  - A risk is any **plausible** event that **could** prevent your project from reaching its goals

- ## Why track risks to closure?

  - Risks are potential problems … you need to avoid them or mitigate their impact

  - You may need help from others or additional resources to resolve the risk

  - Risks should be reported up to management … they can often help if you don't get what you need from others

Risk Management Tool

- **The SPI Risk Management Tool, found at http://software.gsfc.nasa.gov/tools.cfm helps the user implement risk management by**
  - Adding or modifying project-specific risks
  - Defining risk mitigation plans
  - Reviewing and updating risk and risk mitigation status

- **The tool characterizes risk's exposure using the NASA-defined "risk cube"**

- **It also generates a Risk Summary Report and a Risk Details Report**

- **The topic of risk management will be addressed in greater detail at a future Engineering Discussion**

Emails

Importance of Emails

- **They document almost everything you do, including:**
  - **Communication**
  - **Coordination**
  - **Monitoring and controlling**
  - **Issue and action item control**
  - **Risk management**
  - **Measurement and analysis**
  - **CM and quality assurance monitoring**
  - **Contractor activities**
- **They support the implementation of all required processes**

How Do You Keep Emails?

- **A simple approach:**
  - **Create folders in your email tool and store the emails in an organized fashion**
  - **Don't delete an email that has important information (e.g., those that document decisions, approvals, etc.)**

- **Remember that the new mail system limits you on the size of the emails you keep**
  - **You are allowed 200 MB of storage on the server**
  - **Once at your limit you will stop receiving email until you reduce the storage used**
  - **If you reach the limit, save important emails by placing them on your hard drive, storing them in PDF format, exporting them from the mail system, etc.**
    - BUT … Keep all header information so you have dates and to/from information for saved emails

Summary

- **Communication foundations are critical to good management**

- **Take meeting minutes – then store them where you can find them**

- **Record all action items identified and track them to closure**

- **Record and analyze project issues and risks – identify and track to closure all actions needed to resolve them**

- **Keep project emails in an organized fashion**

QUESTIONS?